(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 0 834 576 A3

(12) EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
16.06.1999 Bulletin 1999/24

(43) Date of publication A2:
08.04.1998 Bulletin 1998/15

(21) Application number: **97116548.5**

(22) Date of filing: **06.12.1991**

(51) Int. Cl.[6]: **C12Q 1/68**, C07H 21/00

(84) Designated Contracting States:
BE CH DE DK FR GB IT LI NL SE

(30) Priority: **06.12.1990 US 624114**

(62) Document number(s) of the earlier application(s) in accordance with Art. 76 EPC:
92904971.6 / 0 562 047

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(54) Methods using nucleic acid hybridization patterns on a matrix of oligonucleotides

(57) The present invention provides methods and apparatus for sequencing, fingerprinting and mapping biological polymers, particularly polynucleotides. The methods make use of a plurality of positionally distinct sequence specific recognition reagents, such as polynucleotides. The apparatus employs a substrate comprising positionally distinct sequence specific recognition reagents, such as polynucleotides, which are preferably localized at high densities. The methods and apparatus of the present invention can be used for determining the sequence of polynucleotides, mapping polynucleotides, and developing polynucleotide fingerprints. Polynucleotide fingerprints can be used for identifying individuals, tissue samples, pathological conditions, genetic diseases, infectious diseases, and other applications. Polynucleotide fingerprints can also be used for classification of biological samples, including taxonomy, and to characterize their sources. The invention also provides polynucleotide mapping, fingerprinting, and sequencing as valuable laboratory research tools for use in biological investigations.

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EUROPEAN SEARCH REPORT

Application Number
EP 97 11 6548

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	29 April 1999	MOLINA GALAN E.

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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A : technological background
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EPO FORM 1503 03.82 (P04C01)

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